

CLAIMS

1. A polymeric PTC material comprising: a polymer and carbon black, wherein

the carbon black has a ratio of DBP absorption to C-DBP absorption of greater than 1.0 but not greater than 1.1.

2. A circuit protection component comprising:

a polymeric PTC layer made of the polymeric PTC material according to claim 1; and

electrodes disposed on a top surface and a bottom surface of the polymeric PTC layer.

3. A circuit protection component comprising:

a plurality of polymeric PTC layers made of the polymeric PTC material according to claim 1; and

a plurality of electrodes disposed on a top surface of an uppermost layer of the plurality of polymeric PTC layers, on a bottom surface of a lowermost layer of the plurality of polymeric PTC layers, and between the plurality of polymeric PTC layers, wherein

each of the plurality of electrodes is not in direct electric connection with an adjacent electrode, but is in direct electric connection with an electrode adjacent

to the adjacent electrode.

4. A method for producing a polymeric PTC material comprising a polymer and carbon black, the method comprising the step of:

dispersing the carbon black in the polymer in such a manner that the carbon black has a ratio of DBP absorption to C-DBP absorption of greater than 1.0 but not greater than 1.1.

5. The method for producing the polymeric PTC material according to claim 4, wherein

the step of dispersing the carbon black in the polymer comprises the step of determining whether the ratio of DBP absorption to C-DBP absorption is greater than 1.0 but not greater than 1.1, and continuing to disperse the carbon black when the ratio is outside the range.

6. A method for manufacturing a circuit protection component comprising:

a sheet formation step for processing the polymeric PTC material obtained by the method for producing the polymeric PTC material according to claim 4 into a sheet-like polymeric PTC layer; and

an electrode formation step for forming electrodes on a top surface and a bottom surface of the polymeric PTC layer.

7. A method for manufacturing a circuit protection component comprising:

a sheet formation step for processing the polymeric PTC material obtained by the method for producing the polymeric PTC material according to claim 4 into a sheet-like polymeric PTC layer;

a step for integrally laminating the plurality of polymeric PTC layers alternately with a plurality of electrodes in such a manner that some of the plurality of electrodes are disposed at outermost positions of the plurality of polymeric PTC layers; and

an electrode connection step for establishing an electric connection in such a manner that each of the plurality of electrodes is not in direct electric connection with an adjacent electrode, but is in direct electric connection with an electrode adjacent to the adjacent electrode.